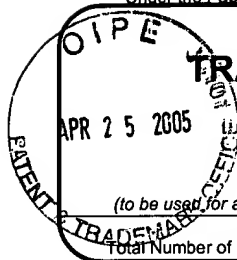


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Mark B. Littlejohn

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Examiner Name

T. Mai

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ENCLOSURES (Check all that apply)

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Affidavits/declaration(s)

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Change of Correspondence Address

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Terminal Disclaimer

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After Allowance Communication to TC

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Appeal Communication to Board
of Appeals and Interferences

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Appeal Communication to TC
(Appeal Notice, Brief, Reply Brief)

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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Printed name

Michael W. Ferrell

Date

April 21, 2005

Reg. No.

31,158

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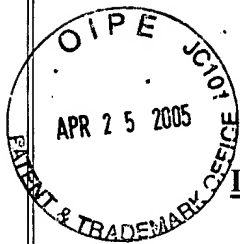
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :
Mark B. Littlejohn et al. : Examiner: T. Mai
U.S. Serial No. 09/978,484 : Group Art Unit: 3727
Filed October 17, 2001 :
Docket No. 2312 (FJ-00-39) :
For: DEEP DISH DISPOSABLE CONTAINER :

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLY BRIEF UNDER 37 CFR §41.41

Sir:

Applicant hereby submits its *Reply Brief* in response to the *Examiner's Answer* dated February 24, 2005 in the above-noted United States Patent Application.

I. INTRODUCTION

In the *Examiner's Answer* of February 24, 2005, the §112, second paragraph rejections in this application were withdrawn. Only obviousness rejections are still at issue. Nevertheless, the Examiner does not point to any disclosure which teaches the claimed invention in this case and indeed ignores the claimed structural features appearing in the groups of claims on appeal.

The Examiner specifically ignores the claim limitation that recites that the plates should have a rigidity of at least 500 grams at 0.5" deflection. Contrary to the Examiner's assertions, the rigidity value represents a physical characteristic of the claimed containers – their stiffness. This is plainly a structural limitation, not a functional one. Furthermore, as with other claim limitations, the Examiner simply disregards the rigidity limitation. This is improper. In obvious determinations, the teachings or knowledge of the prior art must be applied with respect to **each** element of **each** claim:

We agree with appellants that the Board's ground of rejection is simply inadequate on its face. The Board sustained the examiner's very general and broad conclusion of obviousness based on his finding that "[t]he use of grammar is old and well known in the art of speech recognition as a means of optimization which is highly desirable." Aug. 7, 1996 Office Action at 5; accord Decision on Request for Rehearing at 6. Although this statement is likely true, it fails to address the grammar-creation capability limitations of claim 11. While the examiner's statement generally addresses the use of grammar, it does not discuss the unique limitations of extracting, modifying, or processing the grammar to interact with hypermedia sources. **The Board's decision is not supported by substantial evidence because the cited references do not support each limitation of claim 11.** See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1443 (Fed. Cir. 1991).

In re Thrift, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002).

Much of the *Examiner's Answer* reiterates the conclusory language of the *Final Rejection*. Those rejections are not supported by the art cited and are fully addressed in Applicant's *Appeal Brief* filed December 1, 2004. Present discussion is limited to the response

(item 10) appearing at pages 6-10 of the *Examiner's Answer* which appear to be different arguments.

The obviousness rejections are without merit in this case and should be reversed.

II. ARGUMENT

A. Claims Directed to Group I:

The claims on appeal in Group I include Claims 1-6, 9-11, 17-21, 28, 29, 60, 76, 77, and 109. These claims recite, *inter alia*, that the containers have a rigidity of at least 500 grams at 0.5" deflection, have a about 60-90 radial scores, and a height to diameter ratio (H/D) from about 0.1-0.16. Claim 1 is illustrative:

1. A rigid and strong deep dish disposable container prepared from a radially scored, substantially planar paperboard blank, the container having a substantially planar bottom portion, an upwardly extending sidewall portion and an outwardly extending flange portion, at least one of said upwardly extending sidewall portions and said outwardly extending flange portions being provided with a plurality of circumferentially spaced radially extending densified regions formed from a plurality of paperboard layers reformed into substantially integrated fibrous structures generally inseparable into their constituent layers having a thickness generally equal to adjacent areas of the sidewall or flange portions, said deep dish disposable container being provided with a height to diameter ratio of from about 0.1 to about 0.16 and a characteristic flange width to diameter ratio of at least about 0.04, wherein said densified regions extend over a profile distance corresponding to at least a portion of the length of the scores of the paperboard blank from which said container is formed, wherein said radially scored paperboard blank has from about 60 to about 90 radial scores and the deep dish container being further characterized by an SSI Rigidity of at least 500 grams at 0.5 inch deflection.

The inventive containers achieve rigidity values of over twice those disclosed by *Marx*. On page 7, subparagraph a) of the *Examiner's Answer*, the Examiner discounts the disparity in stiffness values by stating that the results are not comparable because different tests were used. This is clearly untenable. The two tests are substantially identical; each test is carried out on a

center – fulcrummed, restrained plate such that the results are entirely comparable. The two tests are reproduced below.

Rigidity test of the present invention

[0076] SSI rigidity was generally measured with the Single Service Institute Plate Rigidity Tester of the type originally available through Single Service Institute, 1025 Connecticut Ave., N.W., Washington, D.C. The SSI Rigidity test apparatus has been manufactured and sold through Sherwood Tool, Inc. Kensington, Conn. This test is designed to measure the rigidity (i.e., resistance to buckling and bending) of paper and plastic plates, bowls, dishes, and trays by measuring the force required to deflect the rim of these products a distance of 0.5 inch while the product is supported at its geometric center. Specifically, the plate specimen is restrained by an adjustable bar on one side and is center fulcrum supported. The rim or flange side opposite to the restrained side is subjected to 0.5 inch deflection by means of a motorized cam assembly equipped with a load cell, and the force (grams) is recorded. The test simulates in many respects the performance of a container as it is held in the hand of a consumer, supporting the weight of the container's contents. SSI rigidity is expressed as grams per 0.5 inch deflection. A higher SSI value is desirable since this indicates a more rigid product. All measurements were done

(pending application at p. 29, line 20+)

Rigidity test of Marx

resistance to a standard amount of deflection. The test fixture utilized, a Marks II Plate Rigidity Tester, has a wedge shaped support platform on which the plate rests. A pair of plate guide posts are mounted to the support platform at positions approximately equal to the radius of the plate from the apex of the wedge shaped platform. The paper plate is laid on the support platform with its edges abutting the two guide posts so that the platform extends out to the center of the plate. A straight leveling bar, mounted for up and down movement parallel to the support platform, is then moved downwardly until it contacts the top of the rim on either side of the plate so that the plate is lightly held between the platform and the horizontal leveling bar. The probe of a movable force gauge, such as a Hunter Force Gauge, is then moved into position to just contact the top of the rim under the leveling bar at the unsupported side of the plate. The probe is lowered to deflect the rim downwardly one-half inch, and the force exerted by the deflected plate on the test probe is measured. For typical prior commercially produced 9 inch

(Marx at Col. 10)

As can be seen, the two tests are virtually the same. In both cases the containers are center supported *and* a probe deflects the rim ½" *and* the force required is recorded. A comparison of the rigidity values achieved by the present invention and those disclosed by Marx shows that the containers of the present invention are remarkably improved. As can be seen from Table 7 of the pending application, reproduced below, the inventive containers achieve rigidity values ranging from 582 grams to 631 grams at 0.5" deflection, while the containers in Marx have rigidity values of between 140 grams and 280 grams. If there were any differences in the tests (and there isn't any of substance), clearly this would not explain away the 100% increase in strength observed.

Rigidity of present invention at 0.5" deflectionRigidity of Marx at 0.5" deflection

TABLE 7

SSI Rigidity for 9 1/2" Diameter, 1 1/4" Height Deep Dish Containers					
Examples	Paperboard Blank	Plate Rigidity MD (kg)	Plate Rigidity CD (kg)	Plate Rigidity GM (kg)	Standard Deviation (GM, 3 samp)
1	48 scores 1.422" long	0.581	0.589	0.585	0.019
2	48 scores 1.844" long	0.596	0.603	0.599	0.010
3	60 scores 1.844" long	0.578	0.587	0.582	0.005
4	72 scores 1.844" long	0.618	0.645	0.631	0.012
5	90 scores 1.844" long	0.607	0.609	0.608	0.007
6	120 scores 1.844" long	0.562	0.570	0.566	0.029

rigidity of about 90 grams/0.5 inch deflection. A comparable 9 inch plate produced in accordance with the invention has rigidity in the range of 140 gms to 280 gms/0.5 inch deflection depending on the paper weight used and the number of score lines.

The inventive containers have rigidities which are improved over *Marx* by a factor of at least 2-fold, and up to about 4.5 fold. The cited art, which discloses a rigidity of, at most, 280 grams is not even remotely suggestive of a container having a rigidity of over 500 grams as provided for in the claimed invention. Substantial improvements such as those of the present invention are patentable.

The Examiner states in subparagraphs b) and g) of item 10A that Applicant fails to show the criticality of the claimed number of scores on the container. Here, the Examiner suggests that the claimed range is not critical because the flanking regions of the number of claimed scores do not drop off dramatically, *i.e.*, outside 60-90. In subparagraph c) the Examiner attempts to prove that the claimed number of scores is not critical by estimating hypothetical rigidity values *based on Applicant's Data*. This is an entirely improper, hindsight use of Applicant's disclosure to reject the Claims – the Examiner is not “interpolating” based on the prior art, he is using Applicant's test data on containers that are not in the prior art.

It is not necessary to show criticality of the claimed number of scores because the Examiner has not made out a *prima facie* case of obviousness regarding the claimed containers. Second, it is fundamental that the subject matter of the invention as a *whole* be evaluated for obviousness, not the number of scores. 35 U.S.C. §103. Thus, it is the combination of the

claimed features which should be scrutinized for obviousness. Applicant notes that the vastly improved stiffness values achieved by the inventive containers represent the combination of the claimed features, *i.e.*, at least the number of scores and the H/D ratio. The *Marx* reference in no way suggests or leads to the claimed combination.

In this case, the claimed number of scores combined with the H/D ratio have been clearly shown to be vastly superior as compared with *Marx*. Aside from being at least twice as stiff, it is clear from Table 7 that the rigidity peaks somewhere in between 60-90 scores, around 72. Furthermore, as stated in the pending application, containers with 48 and 120 scores have undesirable appearances. Thus, the claimed range is in any event critical, not only due to stiffness, but due to appearance and processing considerations.

It is further noted that *Marx* teaches away from the claimed number of scores. As stated in Col. 6:

the container. The number of score lines 42 may vary between 10 and 100 for a circular container depending on the rigidity desired and on the radius R and height H of the container. Generally, the fewer score lines, and
 25 therefore, the fewer resulting pleats, the more rigid the resulting container. Significant to this invention, the fewer score lines for a given reduction in radius at the side wall and rim the greater the overlap of paperboard at the pleats which places more fiber in the area of
 30 densification. Thus, with appropriate pressure, moisture

Marx teaches that it is desirable to *minimize* the numbers of scores for a given reduction in radius to make the container more rigid. In contrast, the inventive deep dish containers employ between 60-90 scores, which represents the upper portion of 10-100, to provide containers with superior rigidity.

Where, as here, the prior art fails to teach each element of the claims, an obviousness rejection is unwarranted. The rejections for the Claims of Group I should be reversed.

B. Claims directed to Group II:

The Claims in Group II are most clearly patentable. These claims include Claims 12-16. Claim 12, below, is representative:

12. The deep dish disposable container according to Claim 1 wherein said container has from about 0.015 inches to about 0.05 inches excess paperboard per score about said flange portion.

In addition to having the patentable features of Group I, these claims are further distinguishable because they recite that the containers have specific amounts of excess paperboard per score, *e.g.*, 0.015 inches to about 0.05 inches.

Notwithstanding the fact that the cited art does not even remotely suggest a specified amount of excess paperboard per score, the Examiner rejected the claims of Group II over *Marx*. In the *Examiner's Answer* on page 9, subparagraph a), he states that 1) "the circumference of the blank does not impart any structure over the final container," and 2) that in any event, *Marx* teaches that the container circumference may be varied compared to the blank.

The Examiner's contention that the amount of excess paperboard does not impart structure to the final container is manifestly incorrect. The excess paperboard per score is incorporated into the finished container. Typically, the excess paperboard from the blank is integrated into the sidewall and flange of the finished container, forming the densified regions in the pleats. The densified regions, in turn, impart rigidity and structural integrity to the finished container. The amount of excess paperboard recited in the Claims of Group II, therefore, is unequivocally a *claimed* structural feature of the inventive containers and must be addressed as such.

The fact that *Marx* discloses a container which may vary in circumference does not in any way teach or suggest the claimed amount of paperboard per score. The amount of paperboard per score is dependent not only on the circumference of the blank, but also on the number of scores, the size of the scores, the circumference of the blank and the circumference and shape of the finished container. *See* p. 22, line 13 through p. 23, line 9 of the application as

originally filed. *Marx* does not teach or suggest the corresponding circumference of the blank, the preferred number of scores, or the size of the scores. *Marx* is completely silent as to the amount of excess paperboard per score.

Here again, the Examiner completely ignored the claim limitations in making the obviousness rejections. This, of course, is improper and the claims in Group II should likewise be allowed.

C. Claims directed to Group III:

The Claims in Group III include Claims 22-27, 30-31, 37, 38, 50-59, 61-63, 69-75, 78, 79, 85, 86, and 108. Claim 108, below, is representative:

108. A rigid and strong deep dish disposable container prepared from a radially scored, substantially planar paperboard blank, the container having a substantially planar bottom portion, an upwardly extending sidewall portion and an outwardly extending flange portion, at least one of said upwardly extending sidewall portions and said outwardly extending flange portions being provided with a plurality of circumferentially spaced radially extending densified regions formed from a plurality of paperboard layers reformed into substantially integrated fibrous structures generally inseparable into their constituent layers having a thickness generally equal to adjacent areas of the sidewall or flange portions, said deep dish disposable container being provided with a height to diameter ratio of from about 0.1 to about 0.16 and a characteristic flange width to diameter ratio of at least about 0.04, wherein said densified regions extend over a profile distance corresponding to at least a portion of the length of the scores of the paperboard blank from which said container is formed, the deep dish container being further characterized by an SSI Rigidity of at least 500 grams at 0.5 inch deflection.

These claims are drawn to containers with structural features with the specified H/D ratio, and a rigidity of at least 500 grams at a 0.5" deflection.

In the *Examiner's Answer* on page 10, he reiterated his opinion that Applicant's rigidity test and the test conducted in *Marx* are not the same, and that even if they are, no criticality has been shown.

As stated above, the rigidity test employed by the Applicant is for all practical purposes identical to the rigidity test in *Marx*. And, as with the claims in Group I, the Examiner has not made out a *prima facie* case of obviousness regarding the rigidity of the claimed containers. The claimed containers have rigidities of at least 500 grams at 0.5" deflection—a range which is not taught or suggested by *Marx*. The obviousness rejections of the Claims in Group III should be reversed.

D. Claims directed to Group IV:

The claims in Group IV are Claims 32-36, 64-68 and 80-84. Claims 27 and 32 are reproduced below for purposes of linking Claim 32 to Claim 22 above.

- 27. The deep dish disposable container according to Claim 22, wherein said radially scored paperboard blank has from about 50 to about 100 radial scores.
- 32. The deep dish disposable container according to Claim 27 wherein said container has from about 0.015 inches to about 0.05 inches excess paperboard per score about said flange portion.

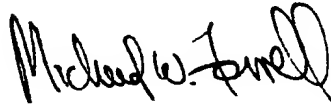
These claims are similar to those in Group II in that both groups recite that the containers have a specified amount of excess paperboard per score. The claims in Group IV, however, do not contain the 60-90 scores recitation.

In the *Examiner's Answer* on page 10, he again stated that the paperboard blank does not impart structure to the final container. He is mistaken; that excess paper is incorporated into the finished pleats of the container. Furthermore, *Marx* is utterly silent on the preferred amount of excess paperboard per score; the claimed subject matter of the claims in Group IV is clearly not contemplated by the reference.

III. CONCLUSION

For the above reasons, all outstanding rejections should be canceled and all claims should be allowed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael W. Ferrell". The signature is fluid and cursive, with the first and last names being more prominent.

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